

Bridge HIV: Research Overview

Innovations in HIV Prevention

Health Commission
November 15, 2022

Susan Buchbinder, MD, Director

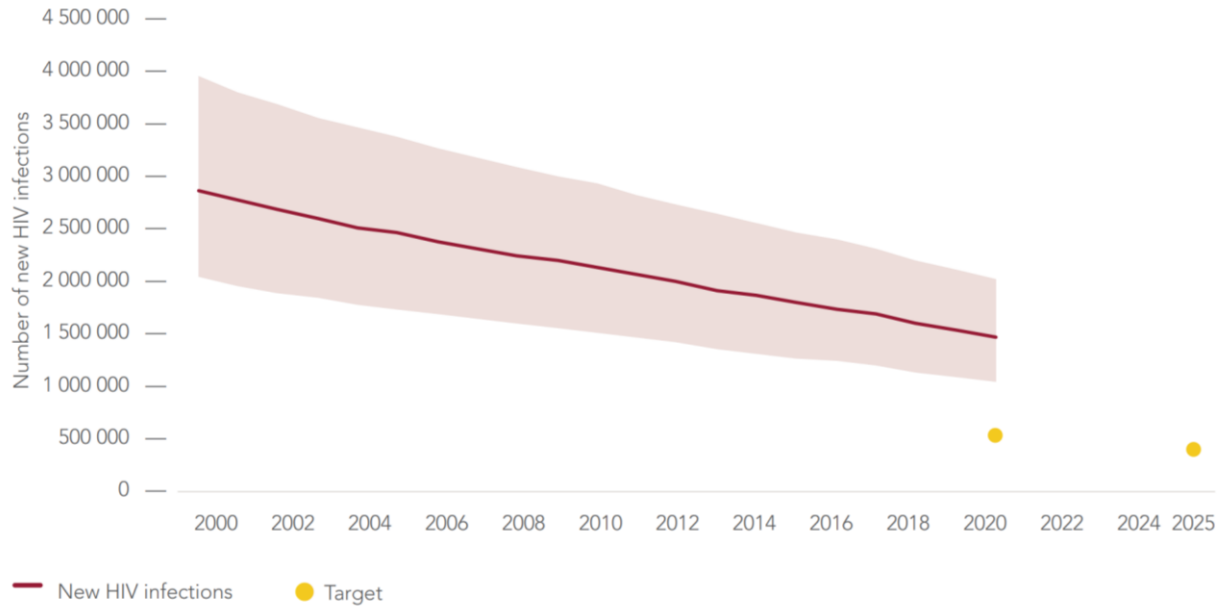
Albert Liu, MD MPH, Clinical Research Director

Hyman Scott, MD MPH, Medical Director of Clinical Research



We have a long way to go to make progress toward HIV prevention goals

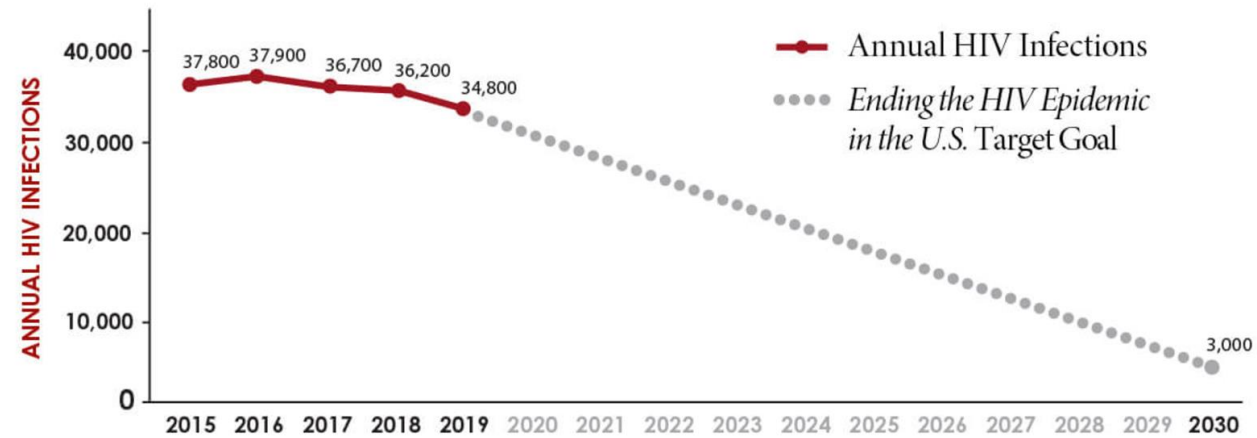
NEW HIV INFECTIONS, GLOBAL, 2000–2020, AND 2020 AND 2025 TARGETS



Note: Please see the Annex on Methods for a description of how these estimates are calculated.
Source: UNAIDS epidemiological estimates, 2021 (<https://aidsinfo.unaids.org/>).

NEW HIV INFECTIONS FELL 8% FROM 2015 TO 2019, AFTER A PERIOD OF GENERAL STABILITY

ANNUAL HIV INFECTIONS IN THE U.S., 2015–2019



For more information, visit
cdc.gov/nchhstp/newsroom

Who we are?

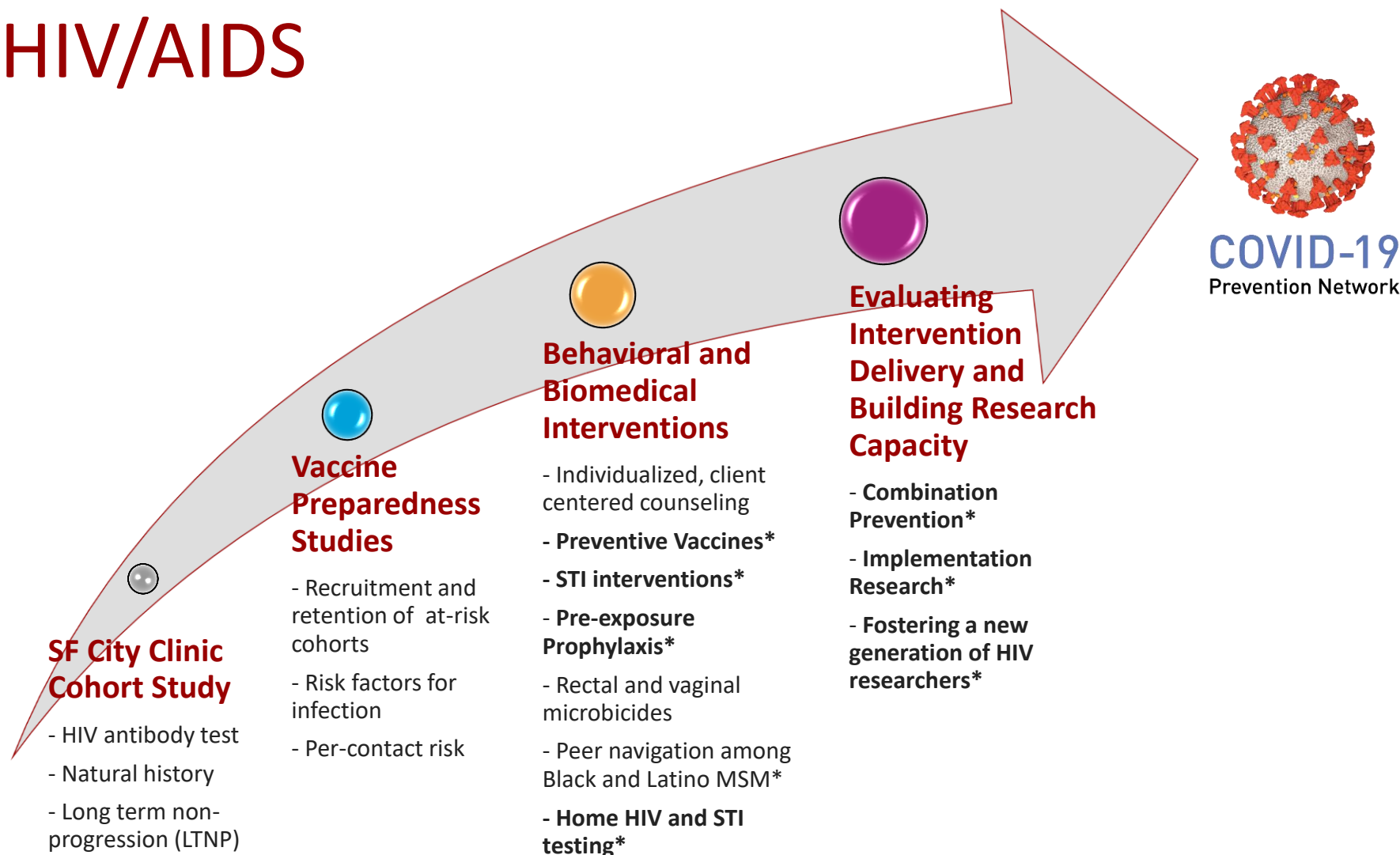
NIH-funded Clinical Trials Unit which operates within the Population Health Division of the San Francisco Department of Public Health and is affiliated with UCSF

Bridge HIV Mission

To collaborate with communities in conducting innovative research that will guide HIV prevention locally and globally.



Bridge HIV: A Tradition of Innovative Research to Prevent HIV/AIDS



*Active studies



HIV VACCINE
TRIALS NETWORK

HIV Vaccines
bNAbs



HPTN
HIV Prevention
Trials Network

Novel PrEP agents
Long acting PrEP formulations
Integrated Strategies



PrEP support tools



Why an HIV vaccine?



The NEW ENGLAND
JOURNAL of MEDICINE

PERSPECTIVE

February 6, 2014

Ending AIDS — Is an HIV Vaccine Necessary?

Anthony S. Fauci, M.D., and Hilary D. Marston, M.D., M.P.H.

In the past decade, according to the 2013 Global Report of the Joint United Nations Program on HIV/AIDS (UNAIDS), the numbers of AIDS-related deaths and new human immunodeficiency virus (HIV) infections have fallen by about one third from their peaks — accomplishments made possible by the accelerated implementation of effective prevention and treatment tools.

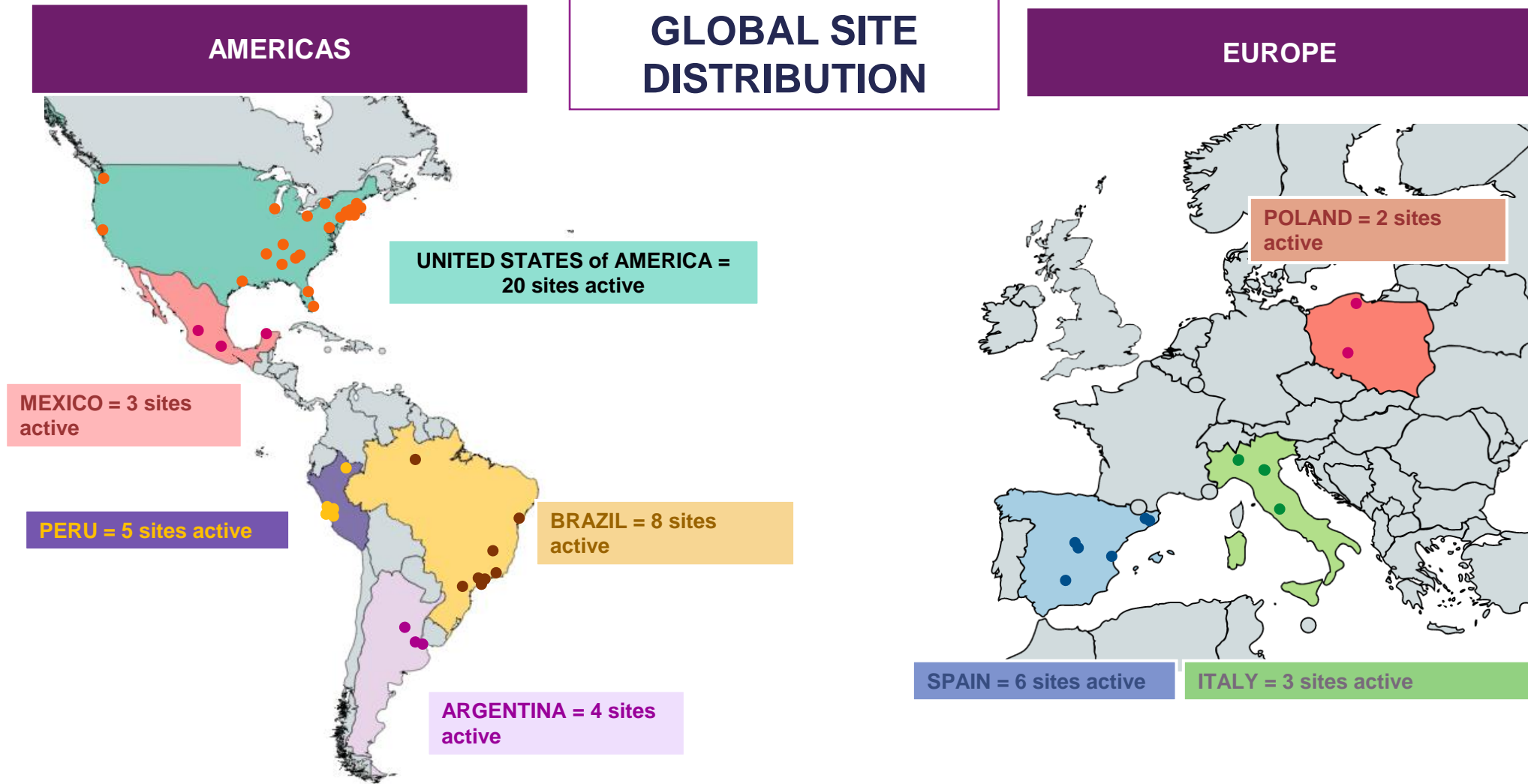
Of particular note, the scale-up of antiretroviral therapy (ART) averted 5.4 million deaths in low- and middle-income countries between 1995 and 2012. HIV prevention efforts have expanded from a narrow agenda of providing condoms and clean needles to use of a comprehensive toolkit of preventive interventions that have had a profoundly positive effect on the pandemic. For exam-

ple, improved approaches to the prevention of mother-to-child transmission have averted the deaths of more than 1 million children worldwide. The rate of male acquisition of HIV can be diminished by two thirds through voluntary medical male circumcision. Preexposure prophylaxis with antiretroviral medication, when adhered to, significantly reduces the risk of HIV infection. Finally,

“Ultimately, we believe, the only guarantee of a sustained end of the AIDS pandemic lies in a combination of non-vaccine prevention methods and the development of a safe and effective HIV vaccine”

Mosaico Clinical Research Sites: Testing Vaccine Efficacy

Led by SFDPH investigators



Other HIV vaccine trials

- New focus on developing broadly neutralizing antibodies (bNAbs), either by direct infusion, or with a vaccine that stimulates the body to make broadly neutralizing antibodies
- Multiple early phase testing trials to test concepts
- HVTN Studies:
 - **HVTN 115:** New vaccine to try to stimulate body to make bNAbs
 - **HVTN 140:** 3 types of bNAbs being infused intravenously or subcutaneously
 - **HVTN 301:** New vaccine to try to stimulate body to make bNAbs
 - **HVTN 305:** New vaccine to try to stimulate body to make bNAbs

PrEP Studies, Part 1: HPTN 091 I Am Study

- Hormone therapy is an unmet need and community priority for trans women.
- HIV/AIDS is an important health issue that trans people face, especially trans women of color.
- In SF, it's estimated that more than a third of adult trans women are living with HIV.
- An accepted and feasible intervention that delivers HIV prevention services with hormone therapy could significantly impact the HIV epidemic among trans women.



What questions will HPTN 091 answer?



Is offering hormone therapy and HIV prevention services including the support of a peer health navigator in one location

- Acceptable?
- Feasible?
- And does it improve the use of HIV prevention services?

Study is taking place in 4 sites in the US and 1 site in Brazil

Other PrEP Studies: Oral

- **COMPARE:** Trial to test 2 different apps to support young MSM in HIV testing & PrEP
- **PCORI:** Testing 2 other mHealth tools to increase uptake/persistence on daily PrEP
- **PrEP211:** Development and testing of an app to provide support for MSM to take “event-driven” or 2-1-1 PrEP around the time of sex
- **PrEP-3D:** Testing of pharmacy-delivered PrEP to increase uptake, persistence in MSM/TG persons
- **PrEP Cohort:** Enrolling persons on PrEP for studies from a pool of investigators
- **Gilead grant:** Use TakeMeHome (home HIV testing) as a gateway to deliver PrEP and PrEP support services

Other PrEP Studies: Injectables and Implants

- **HPTN 083:** Study demonstrated efficacy of long-acting cabotegravir (CAB-LA) bimonthly injections to prevent HIV in MSM/TGW
- **Pillar:** Implementation Science study to test whether enhanced support for MSM/TGM will help people stay on CAB-LA
- **CFAR supplement:** 3-county collaboration (SF, Alameda, Santa Clara counties) to develop a toolbox to help uptake and delivery of CAB-LA
- **Purpose-2:** Trial of Lenacapavir, a novel anti-HIV medication, administered as a subcutaneous injection every 6 months; study in MSM/TG and GNB persons
- **AMBER:** Socio-behavioral research to guide PrEP implant development in MSM, cisgender women, and TGW

Preventing Sexually Transmitted Infections (STI)

- **DoxyPEP:** Conducted at SFCC but with investigators from Bridge HIV involved. Demonstrated that taking doxycycline after sex reduced risk of bacterial STIs (syphilis, chlamydia, gonorrhea) by 66%
- **MAGI Study:** Testing a meningococcal vaccine to prevent gonorrhea infection
- **Herpes Study:** Evaluating the natural history of genital herpes outbreaks; part of planning for future vaccine trials

Other Implementation Science Studies

- **Cheeky:** Testing long-acting injectable antiretroviral treatment in transgender women living with HIV
- **HOPE:** Testing a mobile clinic to deliver “status-neutral care” (for both people living with HIV and people at risk for HIV) to the African American community in Oakland



Thank you!

